

State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Well Operator's Report of Well Work

API 47-051-0310 W County Marshall District Franklin
Quad New Martinsville, WV Pad Name N/A Field/Pool Name N/A
Farm name Axiall Corp. Well Number No. 8 Injection
Operator (as registered with the OOG) Eagle Natrium LLC/Axiall Corp.
Address N. St. Rt. 2, City New Martinsville State WV Zip 26155

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing _____ Easting _____
Landing Point of Curve Northing _____ Easting _____
Bottom Hole Northing _____ Easting _____

Elevation (ft) _____ GL Type of Well ☐ New ☒ Existing Type of Report ☐ Interim ☐ Final
Permit Type ☐ Deviated ☐ Horizontal ☐ Horizontal 6A ☒ Vertical Depth Type ☐ Deep ☐ Shallow
Type of Operation ☐ Convert ☐ Deepen ☐ Drill ☐ Plug Back ☐ Redrilling ☒ Rework ☐ Stimulate
Well Type ☐ Brine Disposal ☐ CBM ☐ Gas ☐ Oil ☐ Secondary Recovery ☒ Solution Mining ☐ Storage ☐ Other _____
Type of Completion ☐ Single ☐ Multiple Fluids Produced ☐ Brine ☐ Gas ☐ NGL ☐ Oil ☐ Other Water Injection
Drilled with ☐ Cable ☒ Rotary

Drilling Media Surface hole ☐ Air ☐ Mud ☐ Fresh Water Intermediate hole ☐ Air ☐ Mud ☐ Fresh Water ☐ Brine
Production hole ☐ Air ☐ Mud ☒ Fresh Water ☐ Brine
Mud Type(s) and Additive(s)
Brine Water mixed with 2%KCL

Date permit issued 11/15/2013 Date drilling commenced 11/20/2013 Date drilling ceased 2/25/2014
Date completion activities began N/A Date completion activities ceased N/A
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft 50' Open mine(s) (Y/N) depths N/A
Salt water depth(s) ft 1050'-1750' Void(s) encountered (Y/N) depths N/A
Coal depth(s) ft 240' - 260' Cavern(s) encountered (Y/N) depths N/A
Is coal being mined in area (Y/N) N

Received
Office of Oil & Gas

NOV 24 2014

Reviewed by: _____

WR-35
Rev. 8/23/13

Page 2 of 4

API 47- 051 - 0310 W Farm name Axiall Corp. Well number No. 8 Injection

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/ N) * Provide details below*
Conductor		16"	61'	New	52.36		
Surface		13 3/8"	414'	New	H-40 @48.9lb/ft		
Coal							
Intermediate 1		10 3/4"	1534'	New	32.75		
Intermediate 2							
Intermediate 3							
Production		8 5/8"	6812'	New	J55 @ 36lb/ft		
Tubing		5"	6280'		17lb/ft		
Packer type and depth set							

Comment Details Perforations were made in the 8 5/8" Production casing to perform a squeeze job, not for fracing purposes. The perms. were made from 5630' to 5628', 5575 to 5573', 3285' to 3283', 2562' 2560', 880' to 878'. Cement was squeezed from 5630' to Surface. 6280' of 5 1/2" 17lb/ft casing was installed and cemented to 3200'.

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor							
Surface							
Coal							
Intermediate 1		888 Sacks					
Intermediate 2							
Intermediate 3							
Production		360 Sacks					
Tubing						3200'	

Drillers TD (ft) N/A Loggers TD (ft) N/A
Deepest formation penetrated N/A Plug back to (ft) N/A
Plug back procedure N/A

Kick off depth (ft) N/A

Check all wireline logs run ☒ caliper ☐ density ☐ deviated/directional ☐ induction
☐ neutron ☐ resistivity ☐ gamma ray ☐ temperature ☐ sonic

Well cored ☐ Yes ☐ No Conventional Sidewall Were cuttings collected ☐ Yes ☐ No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING N/A

WAS WELL COMPLETED AS SHOT HOLE ☐ Yes ☐ No DETAILS N/A

WAS WELL COMPLETED OPEN HOLE? ☐ Yes ☐ No DETAILS N/A

WERE TRACERS USED ☐ Yes ☐ No TYPE OF TRACER(S) USED N/A

Received
Office of Oil & Gas

NOV 24 2014

API 47-051 - 0310W Farm name Axial Corp. Well number No. 8 Injection

PERFORATION RECORD

[illegible]

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

[illegible]

Please insert additional pages as applicable.

Received
Office of Oil & Gas
NOV 24 2014

API 47- 051 - 0310 Farm name Axiall Corp. Well number No. 8 Injection

PRODUCING FORMATION(S)

DEPTHS

N/A _____ TVD _____ MD _____

Please insert additional pages as applicable.

GAS TEST ☐ Build up ☐ Drawdown ☐ Open Flow OIL TEST ☐ Flow ☐ Pump

SHUT-IN PRESSURE Surface _____ psi Bottom Hole _____ psi DURATION OF TEST _____ hrs

OPEN FLOW Gas _____ mcfpd Oil _____ bpd NGL _____ bpd Water _____ bpd GAS MEASURED BY ☐ Estimated ☐ Orifice ☐ Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
	0		0		

Please insert additional pages as applicable.

Drilling Contractor Viking Drilling
Address _____ City _____ State _____ Zip _____

Logging Company Baker Hughes
Address _____ City _____ State _____ Zip _____

Cementing Company Baker Hughes
Address _____ City _____ State _____ Zip _____

Stimulating Company N/A
Address _____ City _____ State _____ Zip _____

Please insert additional pages as applicable.

Completed by Edward T. McLaughlin Telephone 304-455-2200-3476 Office of Oil & Gas
Signature Edward T. McLaughlin Title Brine Field Engineer Date 11/20/2014

Received

Office of Oil & Gas

NOV 24 2014

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Well Operator's Report of Well Work

API 47 - 051 - 0313 W County Marshall District Franklin
Quad New Martinsville, WV Pad Name N/A Field/Pool Name N/A
Farm name Axiall Corp. Well Number No. 9 Injection
Operator (as registered with the OOG) Eagle Natrium LLC/Axiall Corp.
Address N. St. Rt. 2, City New Martinsville State WV Zip 26155

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing _____ Easting _____
Landing Point of Curve Northing _____ Easting _____
Bottom Hole Northing _____ Easting _____

Elevation (ft) _____ GL Type of Well ☐ New ☒ Existing Type of Report ☐ Interim ☐ Final
Permit Type ☐ Deviated ☐ Horizontal ☐ Horizontal 6A ☒ Vertical Depth Type ☐ Deep ☐ Shallow
Type of Operation ☐ Convert ☐ Deepen ☐ Drill ☐ Plug Back ☐ Redrilling ☒ Rework ☐ Stimulate
Well Type ☐ Brine Disposal ☐ CBM ☐ Gas ☐ Oil ☐ Secondary Recovery ☒ Solution Mining ☐ Storage ☐ Other _____
Type of Completion ☐ Single ☐ Multiple Fluids Produced ☐ Brine ☐ Gas ☐ NGL ☐ Oil ☐ Other Water Injection
Drilled with ☐ Cable ☒ Rotary

Drilling Media Surface hole ☐ Air ☐ Mud ☐ Fresh Water Intermediate hole ☐ Air ☐ Mud ☐ Fresh Water ☐ Brine
Production hole ☐ Air ☐ Mud ☒ Fresh Water ☐ Brine
Mud Type(s) and Additive(s)
Brine Water mixed with 2%KCL

Date permit issued 12/16/2013 Date drilling commenced 1/2/2014 Date drilling ceased 2/21/2014
Date completion activities began N/A Date completion activities ceased N/A
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft 50' Open mine(s) (Y/N) depths N/A
Salt water depth(s) ft 1050'-1750' Void(s) encountered (Y/N) depths N/A
Coal depth(s) ft 256' - 261' Cavern(s) encountered (Y/N) depths N/A
Is coal being mined in area (Y/N) N

Received
Office of Oil & Gas

Reviewed by:

NOV 24 2014

WR-35
Rev. 8/23/13

Page 2 of 4

API 47- 051 - 0313 W Farm name Axiall Corp. Well number No. 9 Injection

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/ N) * Provide details below*
Conductor		16"	60'				
Surface							
Coal		13 3/8"	441'		H-40 @48.9lb/ft		
Intermediate 1		10 3/4"	1528'		H-40 @ 32.75		
Intermediate 2							
Intermediate 3							
Production		8 5/8"	6804'		J55 @ 36lb/ft		
Tubing		5 1/2"	6264'		J-55 @17lb/ft		
Packer type and depth set		Peak Technology SMP-X 5 1/2" in 8 5/9" set at 6350'					

Comment Details Removed 6254' of 5 1/2" liner. Perforations were made in the 8 5/8" Production casing to perform a squeeze job, not for fracing purposes. Perfs. were made at 4950' to 4948', 3290' to 3288'. Cement was squeezed from 4950' to 4271' when the casing collapsed. Repair operation was ceased at that time.

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor							
Surface							
Coal							
Intermediate 1		530 Sacks					
Intermediate 2							
Intermediate 3							
Production		400 Sacks					
Tubing							

Drillers TD (ft) N/A Loggers TD (ft) N/A
Deepest formation penetrated N/A Plug back to (ft) N/A
Plug back procedure N/A

Kick off depth (ft) N/A

Check all wireline logs run ☒ caliper ☐ density ☐ deviated/directional ☐ induction
☐ neutron ☐ resistivity ☐ gamma ray ☐ temperature ☐ sonic

Well cored ☐ Yes ☐ No Conventional Sidewall Were cuttings collected ☐ Yes ☐ No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING N/A

WAS WELL COMPLETED AS SHOT HOLE ☐ Yes ☐ No DETAILS N/A

WAS WELL COMPLETED OPEN HOLE? ☐ Yes ☐ No DETAILS N/A

WERE TRACERS USED ☐ Yes ☐ No TYPE OF TRACER(S) USED N/A

Received
Office of Oil & Gas
NOV 24 2014

API 47-051 - 0313W Farm name Axiall Corp. Well number No. 9 Injection

PERFORATION RECORD

[illegible]

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

[illegible]

Please insert additional pages as applicable.

Received
Office of Oil & Gas
NOV 24 2014

API 47- 051 - 0313 W Farm name Axiall Corp. Well number No. 9 Injection

PRODUCING FORMATION(S)

DEPTHS

N/A _____ TVD _____ MD _____

Please insert additional pages as applicable.

GAS TEST ☐ Build up ☐ Drawdown ☐ Open Flow OIL TEST ☐ Flow ☐ Pump

SHUT-IN PRESSURE Surface _____ psi Bottom Hole _____ psi DURATION OF TEST _____ hrs

OPEN FLOW Gas _____ Oil _____ NGL _____ Water _____
_____ mcfpd _____ bpd _____ bpd _____ bpd GAS MEASURED BY
☐ Estimated ☐ Orifice ☐ Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
	0		0		

Please insert additional pages as applicable.

Drilling Contractor Viking Drilling
Address _____ City _____ State _____ Zip _____

Logging Company Baker Hughes
Address _____ City _____ State _____ Zip _____

Cementing Company Baker Hughes
Address _____ City _____ State _____ Zip _____

Stimulating Company N/A
Address _____ City _____ State _____ Zip _____

Please insert additional pages as applicable.

Completed by Edward T. McLaughlin Telephone 304-455-2200-3476
Signature Edward T. McLaughlin Title Brine Field Engineer Date 11/20/2014

Submittal of Hydraulic Fracturing Chemical Disclosure Information

Attach copy of FRACFOCUS Registry

Received
Office of Oil & Gas
NOV 24 2014

State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Well Operator's Report of Well Work

API 47 - 051 - 0443 W County Marshall District Franklin
Quad New Martinsville, WV Pad Name N/A Field/Pool Name N/A
Farm name Axiall Corp. Well Number No. 10 Injection
Operator (as registered with the OOG) Eagle Natrium LLC/Axiall Corp.
Address N. St. Rt. 2, City New Martinsville State WV Zip 26155

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing _____ Easting _____
Landing Point of Curve Northing _____ Easting _____
Bottom Hole Northing _____ Easting _____

Elevation (ft) _____ GL Type of Well ☐ New ☒ Existing Type of Report ☐ Interim ☐ Final
Permit Type ☐ Deviated ☐ Horizontal ☐ Horizontal 6A ☒ Vertical Depth Type ☐ Deep ☐ Shallow
Type of Operation ☐ Convert ☐ Deepen ☐ Drill ☐ Plug Back ☐ Redrilling ☒ Rework ☐ Stimulate
Well Type ☐ Brine Disposal ☐ CBM ☐ Gas ☐ Oil ☐ Secondary Recovery ☒ Solution Mining ☐ Storage ☐ Other _____
Type of Completion ☐ Single ☐ Multiple Fluids Produced ☐ Brine ☐ Gas ☐ NGL ☐ Oil ☐ Other Water Injection
Drilled with ☐ Cable ☒ Rotary

Drilling Media Surface hole ☐ Air ☐ Mud ☐ Fresh Water Intermediate hole ☐ Air ☐ Mud ☐ Fresh Water ☐ Brine
Production hole ☐ Air ☐ Mud ☒ Fresh Water ☐ Brine
Mud Type(s) and Additive(s)
Brine Water mixed with 2%KCL

Date permit issued 9/27/2013 Date drilling commenced 9/30/2013 Date drilling ceased 10/25/2013
Date completion activities began N/A Date completion activities ceased N/A
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft 50' Open mine(s) (Y/N) depths N/A
Salt water depth(s) ft 1050'-1760' Void(s) encountered (Y/N) depths N/A
Coal depth(s) ft 252' - 258' Cavern(s) encountered (Y/N) depths N/A
Is coal being mined in area (Y/N) N

Received
Office of Oil & Gas

Reviewed by: _____

NOV 24 2014

WR-35
Rev. 8/23/13

Page 2 of 4

API 47- 051 - 0443 W Farm name Axiall Corp. Well number No. 10 Injection

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/ N) * Provide details below*
Conductor		16"	61'	New	52.36		
Surface							
Coal							
Intermediate 1		10 3/4"	1611'	New	32.75		
Intermediate 2							
Intermediate 3							
Production		7"	6808.62'	New	J55 @ 26lb/ft		
Tubing							
Packer type and depth set							

Comment Details Perforations were made in the 7" Production casing to perform a squeeze job, not for fracing purposes. The perms. were made from 5060' to 5058'. Cement was squeezed from 5060' to 3120'.

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor							
Surface							
Coal							
Intermediate 1		888 Sacks					
Intermediate 2							
Intermediate 3							
Production		360 Sacks					
Tubing							

Drillers TD (ft) N/A Loggers TD (ft) N/A
Deepest formation penetrated N/A Plug back to (ft) N/A
Plug back procedure N/A

Kick off depth (ft) N/A

Check all wireline logs run ☒ caliper ☐ density ☐ deviated/directional ☐ induction
☐ neutron ☐ resistivity ☐ gamma ray ☐ temperature ☐ sonic

Well cored ☐ Yes ☐ No Conventional Sidewall Were cuttings collected ☐ Yes ☐ No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING N/A

WAS WELL COMPLETED AS SHOT HOLE ☐ Yes ☐ No DETAILS N/A

WAS WELL COMPLETED OPEN HOLE? ☐ Yes ☐ No DETAILS N/A

WERE TRACERS USED ☐ Yes ☐ No TYPE OF TRACER(S) USED N/A

Received
Office of Oil & Gas
NOV 24 2014

API 47-051 - 0443 ^W Farm name Axiall Corp. Well number No. 10 Injection

PERFORATION RECORD

[illegible]

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

[illegible]

Please insert additional pages as applicable.

Received
Office of Oil & Gas
NOV 24 2014

API 47- 051 - 0443 ^W Farm name Axiall Corp. Well number No. 10 Injection

PRODUCING FORMATION(S)

DEPTHS

N/A _____ TVD _____ MD _____

Please insert additional pages as applicable.

GAS TEST ☐ Build up ☐ Drawdown ☐ Open Flow OIL TEST ☐ Flow ☐ Pump

SHUT-IN PRESSURE Surface _____ psi Bottom Hole _____ psi DURATION OF TEST _____ hrs

OPEN FLOW Gas _____ mcfpd Oil _____ bpd NGL _____ bpd Water _____ bpd GAS MEASURED BY
☐ Estimated ☐ Orifice ☐ Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
	0		0		

Please insert additional pages as applicable.

Drilling Contractor Viking Drilling
Address _____ City _____ State _____ Zip _____

Logging Company Baker Hughes
Address _____ City _____ State _____ Zip _____

Cementing Company Baker Hughes
Address _____ City _____ State _____ Zip _____

Stimulating Company N/A
Address _____ City _____ State _____ Zip _____

Please insert additional pages as applicable.

Completed by Edward T. McLaughlin Telephone 304-455-2200-3476
Signature Edward T. McLaughlin Title Brine Field Engineer Date 11/20/2014

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

Received
Office of Oil & Gas
NOV 24 2014

State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Well Operator's Report of Well Work

API 47 - 051 - 0523 W County Marshall District Franklin
Quad New Martinsville, WV Pad Name N/A Field/Pool Name N/A
Farm name Axiall Corp. Well Number No. 11 Injection
Operator (as registered with the OOG) Eagle Natrium LLC/Axiall Corp.
Address N. St. Rt. 2, City New Martinsville State WV Zip 26155

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing _____ Easting _____
Landing Point of Curve Northing _____ Easting _____
Bottom Hole Northing _____ Easting _____

Elevation (ft) _____ GL Type of Well ☐ New ☒ Existing Type of Report ☐ Interim ☐ Final
Permit Type ☐ Deviated ☐ Horizontal ☐ Horizontal 6A ☒ Vertical Depth Type ☐ Deep ☐ Shallow
Type of Operation ☐ Convert ☐ Deepen ☐ Drill ☐ Plug Back ☐ Redrilling ☒ Rework ☐ Stimulate
Well Type ☐ Brine Disposal ☐ CBM ☐ Gas ☐ Oil ☐ Secondary Recovery ☒ Solution Mining ☐ Storage ☐ Other _____
Type of Completion ☐ Single ☐ Multiple Fluids Produced ☐ Brine ☐ Gas ☐ NGL ☐ Oil ☐ Other Water Injection
Drilled with ☐ Cable ☒ Rotary

Drilling Media Surface hole ☐ Air ☐ Mud ☐ Fresh Water Intermediate hole ☐ Air ☐ Mud ☐ Fresh Water ☐ Brine
Production hole ☐ Air ☐ Mud ☒ Fresh Water ☐ Brine
Mud Type(s) and Additive(s)
Brine Water mixed with 2%KCL

Date permit issued 10/21/2013 Date drilling commenced 10/26/2013 Date drilling ceased 11/19/2013
Date completion activities began N/A Date completion activities ceased N/A
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft 50' Open mine(s) (Y/N) depths N/A
Salt water depth(s) ft 1050'-1750' Void(s) encountered (Y/N) depths N/A
Coal depth(s) ft 256' - 261' Cavern(s) encountered (Y/N) depths N/A
Is coal being mined in area (Y/N) N

Received
Office of Oil & Gas
NOV 24 2014

Reviewed by: _____

WR-35
Rev. 8/23/13

Page 2 of 4

API 47- 051 - 0523 Farm name Axiall Corp. Well number No. 11 Injection

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/ N) * Provide details below*
Conductor		16"	62'	New	52.36		
Surface							
Coal							
Intermediate 1		10 3/4"	1609'	New	H-40 @32.75		
Intermediate 2							
Intermediate 3							
Production		7"	8455'	New	N-80 @ 26lb/ft		
Tubing		5"	365'		N-80 @18lb/ft		
Packer type and depth set							

Comment Details Perforations were made in the 7" Production casing to perform a squeeze job, not for fracing purposes. The perms. were made from 4950' to 4948'. Cement was squeezed from 4950' to 2120'.

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor							
Surface							
Coal							
Intermediate 1						Surface	
Intermediate 2							
Intermediate 3							
Production						2120'	
Tubing							

Drillers TD (ft) N/A Loggers TD (ft) N/A
Deepest formation penetrated N/A Plug back to (ft) N/A
Plug back procedure N/A

Kick off depth (ft) N/A

Check all wireline logs run ☒ caliper ☐ density ☐ deviated/directional ☐ induction
☐ neutron ☐ resistivity ☐ gamma ray ☐ temperature ☐ sonic

Well cored ☐ Yes ☐ No Conventional Sidewall Were cuttings collected ☐ Yes ☐ No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING N/A

WAS WELL COMPLETED AS SHOT HOLE ☐ Yes ☐ No DETAILS N/A

WAS WELL COMPLETED OPEN HOLE? ☐ Yes ☐ No DETAILS N/A

WERE TRACERS USED ☐ Yes ☐ No TYPE OF TRACER(S) USED N/A

Received
Office of Oil & Gas
NOV 24 2014

Farm name Axiall Corp.

Well number No. 11 Injection

PERFORATION RECORD

[illegible]

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

[illegible]

Please insert additional pages as applicable.

Received
Office of Oil & Gas
NOV 24 2014

API 47- 051 - 0523 Farm name Axiall Corp. Well number No. 11 Injection

PRODUCING FORMATION(S)

DEPTHS

N/A _____ TVD _____ MD _____

Please insert additional pages as applicable.

GAS TEST ☐ Build up ☐ Drawdown ☐ Open Flow OIL TEST ☐ Flow ☐ Pump

SHUT-IN PRESSURE Surface _____ psi Bottom Hole _____ psi DURATION OF TEST _____ hrs

OPEN FLOW Gas _____ mcfpd Oil _____ bpd NGL _____ bpd Water _____ bpd GAS MEASURED BY ☐ Estimated ☐ Orifice ☐ Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
	0		0		

Please insert additional pages as applicable.

Drilling Contractor Viking Drilling
Address _____ City _____ State _____ Zip _____

Logging Company Baker Hughes
Address _____ City _____ State _____ Zip _____

Cementing Company Baker Hughes
Address _____ City _____ State _____ Zip _____

Stimulating Company N/A
Address _____ City _____ State _____ Zip _____

Please insert additional pages as applicable.

Completed by Edward T. McLaughlin Telephone 304-455-2200-3476
Signature Edward T. McLaughlin Title Brine Field Engineer Date 11/20/2014

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

Received
Office of Oil & Gas
NOV 24 2014

WR-35
Rev (9-11)

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas
Well Operator's Report of Well Work

DATE: 1/22/13 Rev 11/12/14
API #: 47-67-00942

Farm name: MeadWestvaco Corp.

Operator Well No.: MWV Rupert 2H

LOCATION: Elevation: 3,010

Quadrangle: Richwood

District: Kentucky

County: Nicholas

Latitude: 13.650 Feet South of 38 Deg. 15 Min. 00 Sec.
Longitude 7.990 Feet West of 60 Deg. 32 Min. 30 Sec.

Company: BRC Operating Company, LLC

Address: 200 Crescent Court, Suite 200 Dallas, TX 75201	Casing & Tubing 20"	Used in drilling	Left in well 130'	Cement fill up Cu. Ft. 180 Tail
Agent: Marc A. Monteleone	13/ 3/8"		1,277'	657 Lead/196 Tail
Inspector: Ed Gainer	9 5/8"		5,073'	1,555 Lead/360 Tail
Date Permit Issued: 5/3/2010	7 5/8" Liner		7,062'	696 Tail
Date Well Work Commenced: 10/2/10	4 1/2"		9,698'	696 Tail
Date Well Work Completed: 10/30/12		Tubing plug	4,526'	
Verbal Plugging:		Tubing plug	4,650'	
Date Permission granted on:				
Rotary <input type="checkbox"/> Cable <input type="checkbox"/> Rig <input checked="" type="checkbox"/>				
Total Vertical Depth (ft): 7,752				
Total Measured Depth (ft): 9,698				
Fresh Water Depth (ft.): 182				
Salt Water Depth (ft.):				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.):				
Void(s) encountered (N/Y) Depth(s) N				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 7,600-7,700

Gas: Initial open flow N/A MCF/d Oil: Initial open flow Bbl/d

Final open flow N/A MCF/d Final open flow Bbl/d

Time of open flow between initial and final tests N/A Hours

Static rock Pressure N/A psig (surface pressure) after N/A Hours

Second producing formation Pay zone depth (ft)

Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d

Final open flow MCF/d Final open flow Bbl/d

Time of open flow between initial and final tests Hours

Static rock Pressure psig (surface pressure) after Hours

RECEIVED
Office of Oil and Gas

NOV 12 2014

WV Department of
Environmental Protection

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Signature

Date

Were core samples taken? Yes _____ No XWere cuttings caught during drilling? Yes X No _____Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list Formation Micro Imager (4,925' - 6,978')
Gamma Ray (4,923' - 8,954') MWU Gamma Ray (0,590' - 7,760') Cased Hole Production Log (7,000' - 9,500')

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

Perforated Intervals, Fracturing, or Stimulating:

7,919' - 9,608' 255 Holes

Plug Back Details Including Plug Type and Depth(s):

Formations Encountered:Surface:Top Depth

/

Bottom Depth

<u>Geologic Age</u>	<u>Formation</u>	<u>Lithology</u>	<u>Top Depth</u>	<u>Bottom Depth</u>
Mississippian	Greenbrier	Limestone	2490	2543
Mississippian		Shale	2543	2858
Mississippian	Injun	Sandstone	2858	2875
Mississippian		Shale	2875	2884
Mississippian	Squaw	Sandstone	2884	2890
Mississippian		Shale	2890	2967
Mississippian	Weir	Sandstone	2967	2975
Mississippian		Shale	2975	3433
Mississippian	Berea	Sandstone	3433	3455
Mississippian		Shale	3455	3523
Devonian	Gordon	Sandstone	3523	3548
Devonian		Siltstone & Shale	3548	4493
Devonian	Huron	Shale	4493	7378
Devonian	Rhinestreet	Organic Shale	7378	7770
Devonian	Marcellus	Organic Shale	7770	TD

WR-35
Rev (9-11)

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas
Well Operator's Report of Well Work

DATE: 1/22/13 REV. 11/12/14
API #: 47-67-00943

Farm name: MoadWestvaco Corp Operator Well No.: MWV Rupert 4H
LOCATION: Elevation: 3,065' Quadrangle: Richwood
District: Kentucky County: Nicholas
Latitude: 850 Feet South of 36 Deg. 12 Min. 30 Sec.
Longitude 9800 Feet West of 80 Deg. 32 Min. 30 Sec.

Company: BRC Operating Company, LLC

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
200 Crescent Court, Suite 200 Dallas, TX 75201	20"	130'	130'	180 Tail
Agent: Marc A. Monteleone	13 3/8"	1,555'	1,555'	662 Lead/213 Tail
Inspector: Ed Gainer	9 5/8"	6,949'	6,949'	1,852 Lead/190 Tail
Date Permit Issued: 7/21/10	5 1/2"	12,702'	12,702'	1,694 Lead/1,487 Tail
Date Well Work Commenced: 2/28/11				
Date Well Work Completed: 5/25/12				
Verbal Plugging:				
Date Permission granted on:				
Rotary <input type="checkbox"/> Cable <input type="checkbox"/> Rig <input checked="" type="checkbox"/>				
Total Vertical Depth (ft): 7,743				
Total Measured Depth (ft): 12,702				
Fresh Water Depth (ft.): 182				
Salt Water Depth (ft.):				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.):				
Void(s) encountered (N/Y) Depth(s) N				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 7,080 - 7,810
Gas: Initial open flow 2,718 MCF/d Oil: Initial open flow Bbl/d
Final open flow 1,300 MCF/d Final open flow Bbl/d
Time of open flow between initial and final tests 72 Hours
Static rock Pressure 3,100 psig (surface pressure) after 35 Hours

Second producing formation Pay zone depth (ft)
Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d
Final open flow MCF/d Final open flow Bbl/d
Time of open flow between initial and final tests Hours
Static rock Pressure psig (surface pressure) after Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

[Signature]
Signature

11/12/2014
Date

RECEIVED
Office of Oil and Gas

NOV 12 2014

WV Department of
Environmental Protection

67-00943

Were core samples taken? Yes _____ No ☒Were cuttings caught during drilling? Yes ☒ No _____

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list _____

Gamma Ray / CCL CCL-Casing Collar Locator

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

Perforated Intervals, Fracturing, or Stimulating:

Perforations: 12,600' - 8,320' 525 Holes

Plug Back Details Including Plug Type and Depth(s):

Formations Encountered: _____ Top Depth _____ / _____ Bottom Depth _____
 Surface: _____

<u>Geologic Age</u>	<u>Formation</u>	<u>Lithology</u>	<u>Top Depth</u>	<u>Bottom Depth</u>
Mississippian	Greenbrier	Limestone	2490	2543
Mississippian		Shale	2543	2858
Mississippian	Injun	Sandstone	2858	2875
Mississippian		Shale	2875	2884
Mississippian	Squaw	Sandstone	2884	2890
Mississippian		Shale	2890	2967
Mississippian	Weir	Sandstone	2967	2975
Mississippian		Shale	2975	3433
Mississippian	Berea	Sandstone	3433	3455
Mississippian		Shale	3455	3523
Devonian	Gordon	Sandstone	3523	3548
Devonian		Siltstone & Shale	3548	4493
Devonian	Huron	Shale	4493	7382
Devonian	Rhinestreet	Organic Shale	7382	7620
Devonian	Marcellus	Organic Shale	7620	TD

WR-35
Rev (9-11)

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas
Well Operator's Report of Well Work

DATE: 1/22/13 REV. 11/12/14
API #: 47-67-30946

Farm name: MeadWestvaco Corp.

Operator Well No.: MWV Rupert 5H

LOCATION: Elevation: 3,025'

Quadrangle: Richwood

District: Kentucky

County: Nicholas

Latitude: 13.650 Feet South of 38 Deg. 15 Min. 00 Sec.

Longitude: 8.010 Feet West of 80 Deg. 32 Min. 30 Sec.

Company: BRC Operating Company, LLC

Address:	200 Crescent Court, Suite 200	Casing & Tubing	Used in drilling	Left in well	Comment fill up Cu. Ft.
	Dallas, TX 75201	20"	130'	130'	180 Tail
Agent:	Marc A. Monteleone	13 3/8"	1,550'	1,550'	1,443 Tail
Inspector:	Ed Gainer	9 5/8"	6,799'	6,799'	2,706 Lead/202 Tail
Date Permit Issued:	10/7/10	5 1/2"	12,200'	12,200'	1,398 Lead/1,757 Tail
Date Well Work Commenced:	6/23/11				
Date Well Work Completed:	7/29/11				
Verbal Plugging:					
Date Permission granted on:					
Rotary <input type="checkbox"/> Cable <input type="checkbox"/> Rig <input checked="" type="checkbox"/>					
Total Vertical Depth (ft):	7,728				
Total Measured Depth (ft):	12,200				
Fresh Water Depth (ft.):	182				
Salt Water Depth (ft.):					
Is coal being mined in area (N/Y)?	N				
Coal Depths (ft.):	N/A				
Void(s) encountered (N/Y) Depth(s)	N				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 7,600 - 7,700

Gas: Initial open flow 0 MCF/d Oil: Initial open flow - Bbl/d

Final open flow 0 MCF/d Final open flow - Bbl/d

Time of open flow between initial and final tests 72 Hours

Static rock Pressure 3,100 psig (surface pressure) after 36 Hours

Second producing formation Pay zone depth (ft)

Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d

Final open flow MCF/d Final open flow Bbl/d

Time of open flow between initial and final tests Hours

Static rock Pressure psig (surface pressure) after Hours

RECEIVED
Office of Oil and Gas

NOV 12 2014

WV Department of
Environmental Protection

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.


Signature

1/12/2014
Date

67-00945⁵Were core samples taken? Yes _____ No XWere cuttings caught during drilling? Yes X No _____Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list MWD Gamma Ray (7,043' - 12,407')
MWD Measurement While Drilling

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

Perforated Intervals, Fracturing, or Stimulating:

Perforations - 4 sets:

12,432' - 12,292' 25 Holes

12,252' - 12,112' 25 Holes

12,072' - 11,932' 25 Holes

11,892' - 11,752' 25 Holes

Plug Back Details Including Plug Type and Depth(s):

Formations Encountered: _____ Top Depth _____ / _____ Bottom Depth _____
Surface: _____

<u>Geologic Age</u>	<u>Formation</u>	<u>Lithology</u>	<u>Top Depth</u>	<u>Bottom Depth</u>
Mississippian	Greenbrier	Limestone	2490	2543
Mississippian		Shale	2543	2858
Mississippian	Injun	Sandstone	2858	2875
Mississippian		Shale	2875	2884
Mississippian	Squaw	Sandstone	2884	2890
Mississippian		Shale	2890	2967
Mississippian	Weir	Sandstone	2967	2975
Mississippian		Shale	2975	3433
Mississippian	Berea	Sandstone	3433	3455
Mississippian		Shale	3455	3523
Devonian	Gordon	Sandstone	3523	3548
Devonian		Siltstone & Shale	3548	4493
Devonian	Huron	Shale	4493	7382
Devonian	Rhinestreet	Organic Shale	7382	7620
Devonian	Marcellus	Organic Shale	7620	TD

WR-35
Rev (9-11)

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas
Well Operator's Report of Well Work

DATE: 1/22/13 REV. 11/12/14
API #: 47-67-00946

Farm name: MeadWestvaco Corp. Operator Well No.: MWV Rupert 7H

LOCATION: Elevation: 3,040 Quadrangle: Richwood

District: Kentucky County: Nicholas
Latitude: 650 Feet South of 38 Deg. 12 Min. 30 Sec.
Longitude 9600 Feet West of 80 Deg. 32 Min. 30 Sec.

Company: BRC Operating Company, LLC

Address: 200 Crescent Court, Suite 200	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Dallas, TX 75201	20"	138'	138'	207 Tail
Agent: Marc A. Monteleone	13 3/8"	1,555'	1,555'	1,560 Tail
Inspector:	9 5/8"	6,030'	6,030'	2,038 Lead/190 Tail
Date Permit Issued: 3/22/11	5 1/2"	12,552'	12,552'	1,400 Lead/1,650 Tail
Date Well Work Commenced: 4/11/11				
Date Well Work Completed: 5/18/11	PLUGS			2,015 Tail
Verbal Plugging:				
Date Permission granted on:				
Rotary <input type="checkbox"/> Cable <input type="checkbox"/> Rig <input checked="" type="checkbox"/>				
Total Vertical Depth (ft): 7,695				
Total Measured Depth (ft): 12,552				
Fresh Water Depth (ft.): 182				
Salt Water Depth (ft.):				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): N/A				
Void(s) encountered (N/Y) Depth(s) N				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation: Marcellus Pay zone depth (ft) 7,650 - 7,810
Gas: Initial open flow 2,369 MCF/d Oil: Initial open flow Bbl/d
Final open flow 650 MCF/d Final open flow Bbl/d
Time of open flow between initial and final tests 72 Hours
Static rock Pressure 3,100 psig (surface pressure) after 11 hours

Second producing formation Pay zone depth (ft)
Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d
Final open flow MCF/d Final open flow Bbl/d
Time of open flow between initial and final tests Hours
Static rock Pressure psig (surface pressure) after Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.


Signature

4/12/2014
Date

RECEIVED
Office of Oil and Gas

NOV 12 2014

WV Department of
Environmental Protection

67.00946

Were core samples taken? Yes _____ No XWere cuttings caught during drilling? Yes X No _____

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list _____

Gamma Ray / CCL Casing Collar Locator

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

Perforated Intervals, Fracturing, or Stimulating:

Perforations: 12,513' - 8,233' 525 Holes

Plug Back Details Including Plug Type and Depth(s):

Formations Encountered: _____ Top Depth _____ / _____ Bottom Depth _____
 Surface: _____

<u>Geologic Age</u>	<u>Formation</u>	<u>Lithology</u>	<u>Top Depth</u>	<u>Bottom Depth</u>
Mississippian	Greenbrier	Limestone	2490	2543
Mississippian		Shale	2543	2858
Mississippian	Injun	Sandstone	2858	2875
Mississippian		Shale	2875	2884
Mississippian	Squaw	Sandstone	2884	2890
Mississippian		Shale	2890	2967
Mississippian	Weir	Sandstone	2967	2975
Mississippian		Shale	2975	3433
Mississippian	Berea	Sandstone	3433	3455
Mississippian		Shale	3455	3523
Devonian	Gordon	Sandstone	3523	3548
Devonian		Siltstone & Shale	3548	4493
Devonian	Huron	Shale	4493	7382
Devonian	Rhinestreet	Organic Shale	7382	7620
Devonian	Marcellus	Organic Shale	7620	TD